

Adams & Hatch,

Wood Chipel.

N<sup>o</sup> 82,058.

Patented Sep. 15, 1868.

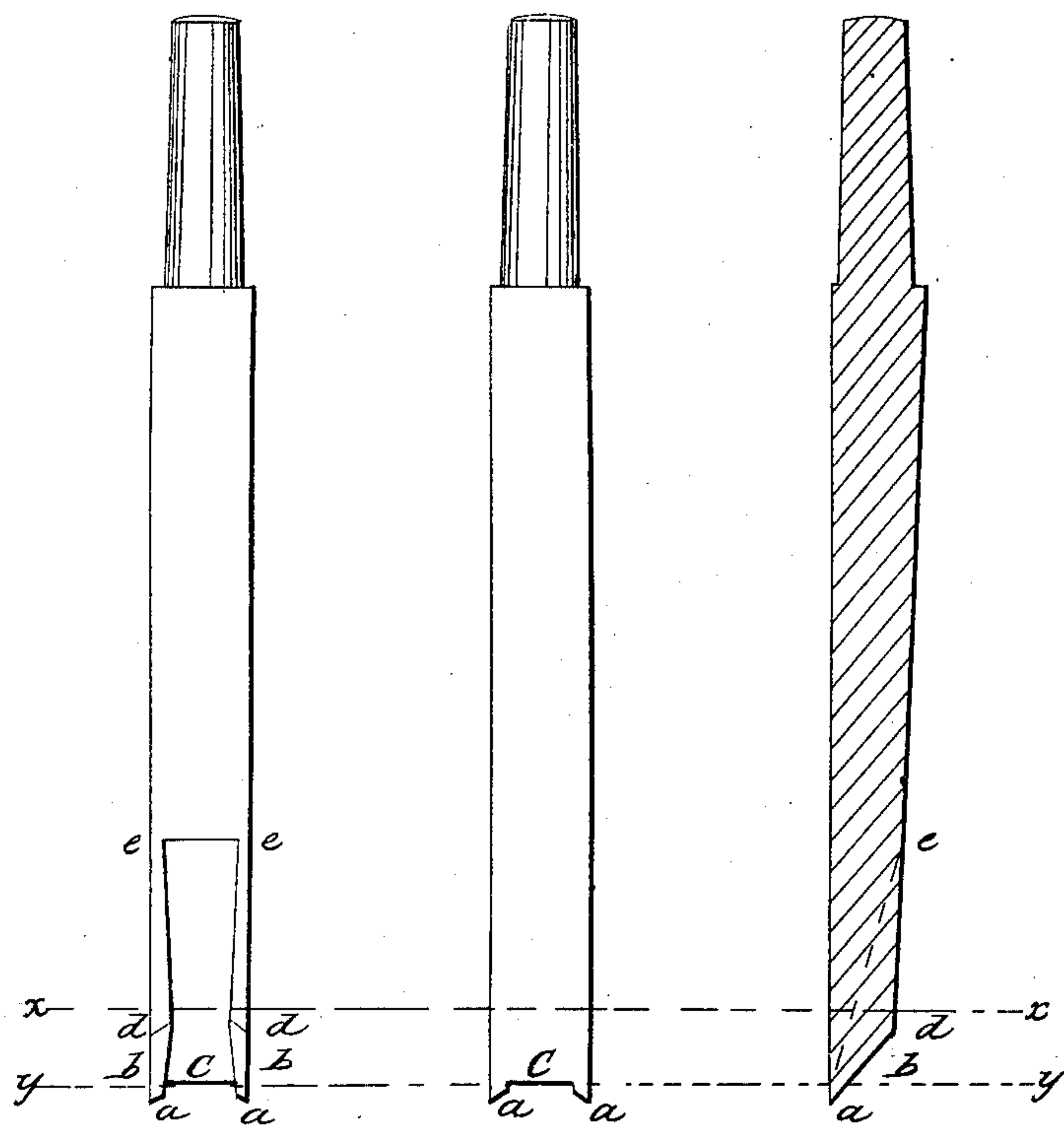


Fig. 2.

Fig. 3.

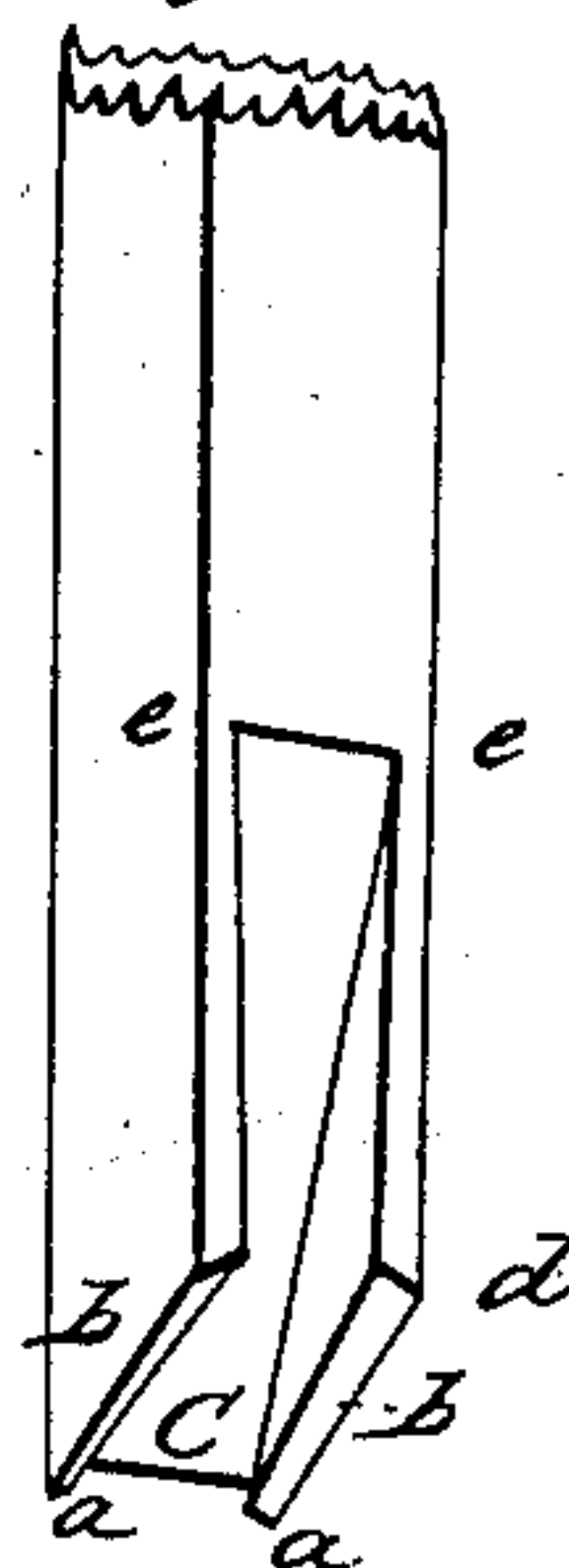
Fig. 4.

Fig. 1.

Fig. 6.



Fig. 5.



Witnesses:  
A. F. Cowdery

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# United States Patent Office.

OTIS ADAMS AND JAMES HATCH, OF SAN FRANCISCO, CALIFORNIA.

*Letters Patent No. 82,058, dated September 15, 1868.*

## IMPROVEMENT IN MORTISING-CHISEL.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, OTIS ADAMS and JAMES HATCH, of the city and county of San Francisco, and State of California, have invented certain Improvements in the Common Mortising-Chisel, applicable particularly to the machine-mortising chisel; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention consists in providing the common chisel with two lips, so formed and placed as to clear the mortise of the core or chips while the chisel is in operation.

In order to enable others skilled in the art to make and use our invention, we will proceed to describe the construction and operation of the same with reference to the accompanying drawings, forming a part of this specification, in which similar letters of reference in the different figures indicate the same parts, and in which—

Figure 1 is a perspective view of edge-end of a chisel having our improvements.

Figure 2 is a back view of the same.

Figure 3 is a front or face view of the same.

Figure 4 is a side view of the same.

Figure 5 is a transverse-section view in the line  $xx$ , figs. 2, 3, and 4.

Figure 6 is a transverse-section view in the line  $yy$ , figs. 2, 3, and 4.

For the purposes of description, let the shank-end of the chisel be called its upper end, and the opposite one be called the lower end, and let the surface on which the bevel is made be called the back, and the opposite one be called the face, and the remaining two surfaces of the cube be called the sides.

The lower end of the chisel is bevelled to an edge, in the ordinary manner, except that a thick lip is left on each side, as shown by the drawings.

The lower end of the lip has a double bevel, to wit, the ordinary chisel-bevel, to an edge, at the lower and front corner,  $a$ , (which we call the longitudinal bevel,) and another bevel to an edge at and along the lower end and outer side,  $b$ , of the lip, (which we will call the lateral bevel.)

Both these bevels are much more obtuse than the ordinary chisel-bevel, while the bevel of the main blade,  $c$ , between the lips, is considerably more acute than the ordinary lipless mortising-chisel.

Another peculiarity of the lip is, that it is thickest at its lower-back corner,  $d$ , and becomes gradually thinner as it approaches the main blade.

And still another peculiarity is, that the lip is thicker at its lower end (at  $a$ ) than at its upper end, (at  $e$ ), thus making the space between the lips doubly dove-tailed; that is to say, this space enlarges both inwardly (towards the main blade) and upwardly.

The lips extend somewhat below the main edge, as shown by the drawings.

The operation is as follows:

The lip's chip is cut in advance of the main chip by the edge  $a$ . It is then pressed backward abruptly by the longitudinal bevel, and, at the same time, is twisted inwardly by the lateral bevel, and thus broken clear of the main chip, and left crumbled and loose in the mortise.

The main chip passes upward through the channel between the lips, being slightly compressed at the lowest and smallest part of the passage.

The double dove-tail prevents the chip from escaping backwardly with the lip-chip, or downwards, as the chisel is withdrawn from the mortise, leaving it to be forced upwards clear of all obstructions, and thrown out of the mortise, together with the loose lip-chips, by the upward movement of the chisel.

The side edges of the lips serve to smooth the sides of the mortise in a very satisfactory manner.

We are aware that mortising-chisels have been made with lips at right angles to the main part or body of the chisel, and the ends of the lips bevelled and inclined, and we therefore do not claim a chisel so constructed; but

What we do claim, and desire to secure by Letters Patent, is—

Making the lips bevelled from the edge to the main part of the chisel, and with the ends bevelled and inclined, as herein set forth.

San Francisco, December 21, 1867.

OTIS ADAMS,  
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Witnesses:

ALFRED RIX,  
J. F. COWDERY.